AMENDMENTS TO THE CLAIMS

Please amend Claims 7, 11, 12, 16, 25, 32, 39, 41, 43, and 45-50. Claims 8-10, 13-15, 17-24, 26-31, 33-38, 40, 42, and 44 remain as previously pending.

1.-6 (Canceled)

7. (Currently Amended) A computer monitoring and diagnostic system, comprising:

a computer, having a computing device and a housing;

wherein the computer includes a plurality of canisters, each of the canisters having a plurality of card slots;,

wherein the computer further comprises a plurality of canister controllers; and wherein the ~~computer~~ canister controllers are~~is~~ configured to examine canister fan speeds associated with canister fans and to control power to the canisters; and

wherein if the canister fan speed of least one canister fan is below a threshold, the canister controller is configured to increase the canister fan speed of the at least one canister fan without user input.

8. (Original) The system of Claim 7, wherein at least one of the canisters is removable from the computer.

9. (Original) The system of Claim 7, additionally comprising a microcontroller which is configured to log conditions about the canister to a recording system.

10. (Original) The system of Claim 9, wherein the microcontroller is configured to log messages to non-volatile random access memory.

11. (Currently Amended) A computer monitoring and diagnostic system, comprising:

a computer;

at least one sensor, located within the computer, configured to sense environmental conditions within the computer; and

an actuator configured to modify an environmental condition of the computer without user input, the modification based at least in part on the environmental conditions sensed by the computer.

12. (Currently Amended) A computer monitoring and diagnostic system, comprising:

a computer, the computer comprising a plurality of networked microprocessors; and

at least one sensor, located within the computer, configured to sense conditions within the computer, the at least one sensor communicating with the plurality of networked microprocessors;

wherein at least one microprocessor of the plurality of networked microprocessors is configured to modify the condition of the computer based at least in part on the sensed condition; and

wherein the modification is performed without user input.

13. (Original) The system of Claim 12, wherein sensing the conditions comprises checking for a microcontroller bus time-out.

14. (Original) The system of Claim 12, wherein the computer is configured to maintain a system log in a non-volatile random access memory.

15. (Original) The system of Claim 12, wherein sensing the conditions comprises monitoring the speed of a canister fan.

16. (Currently Amended) A computer monitoring and diagnostic system, comprising:

a computer, having a computing device, at least one cooling fan, and a housing;

at least one sensor, located within the computer, configured to sense temperature conditions within the computer; and

at least one microcontroller, located within the computer, wherein the microcontroller is configured to process requests for temperature conditions from the computer, ~~and~~ responsively ~~provides~~ provide sensed temperature conditions to the computer, and, based at least in part on the sensed temperature conditions, increase the speed of the at least one cooling fan without user input.

17. (Original) The system of Claim 16, wherein the computer includes a plurality of canisters and the microcontroller is configured to control power to the canisters.

18. (Original) The system of Claim 16, wherein the microcontroller is configured to control power to a slot.

19. (Original) The system of Claim 16, wherein the microcontroller is configured to log conditions to a recording system.

20. (Original) The system of Claim 16, wherein the microcontroller is configured to log messages to non-volatile random access memory.

21. (Original) The system of Claim 16, wherein the microcontroller is configured to control the system power to the computer.

22. (Original) The system of Claim 16, wherein the microcontroller is connected to an I2C bus.

23. (Original) The system of Claim 16, wherein one of the microcontrollers in the microcontroller network is connected to a canister.

24. (Original) The system of Claim 16, further comprising an actuator connected to the microcontroller, wherein the actuator is configured to modify an environmental condition of the computer.

25. (Currently Amended) A microcontroller for diagnosing and managing the conditions of a computer, the microcontroller network comprising:

at least one microcontroller, located within the computer, wherein the microcontroller is configured to self-manage ~~the environmental~~ temperature conditions within the computer;

wherein the microcontroller is further configured to increase fan speed of cooling fans located within the computer without user input if a temperature warning is indicated.

26. (Original) The microcontroller of Claim 25, wherein the microcontroller is configured to check for a microcontroller bus time-out.

27. (Original) The microcontroller of Claim 25, wherein the microcontroller is configured to check for a manual system board reset.

28. (Original) The microcontroller of Claim 25, wherein the microcontroller is configured to check for a software reset command.

29. (Original) The microcontroller of Claim 25, wherein the microcontroller is configured to check for system faults.

30. (Original) The microcontroller of Claim 25, wherein the microcontroller is configured to maintain a system log in a non-volatile random access memory.

31. (Original) The microcontroller of Claim 25, wherein a selected one of the at least one microcontroller is configured to monitor the speed of a canister fan.

32. (Currently Amended) A computer monitoring and diagnostic system, comprising:

a computer, having a plurality of computer-related components, wherein the components have associated environmental and systemic conditions;

at least one sensor configured to sense the environmental and systemic conditions, wherein the sensor is located within the computer; and

at least one microcontroller connected to the sensor and the computer, wherein the microcontroller is configured to modify the environmental conditions of the computer without user input if the sensed environmental conditions of the computer indicate a warning.

33. (Original) The system of Claim 32, wherein the microcontroller is located within the computer.

34. (Original) The system of Claim 32, wherein the microcontroller is configured to process requests for environmental or systemic conditions from the computer and is configured to responsively provide the environmental or systemic conditions to the computer.

35. (Original) The system of Claim 32, wherein the computer-related components comprise at least one component selected from the group consisting of: a system board, a central processing unit (CPU), a CPU fan, a backplane board, a backplane fan, a chassis, a chassis fan, a canister, a canister fan, a PCI card, and a PCI card fan.

36. (Original) The system of Claim 32, wherein the sensor is configured to detect the temperature levels of selected ones of the computer-related components.

37. (Original) The system of Claim 32, wherein the sensor is configured to detect the speed of a fan intended to cool down selected ones of the computer-related components.

38. (Original) The system of Claim 32, wherein the sensor is configured to detect the voltage level applied to selected ones of the computer-related components.

39. (Currently Amended) A method of monitoring and diagnosing a computer connected to a microcontroller, the method comprising:

receiving from a source a request for the environmental conditions of the computer;

sensing the environmental conditions of the computer with the microcontroller;

receiving the sensed environmental conditions in the microcontroller; ~~and~~

communicating the sensed environmental conditions from the microcontroller to the source of the request; and

sending a command to modify the environmental conditions of the computer based at least in part on the sensed environmental conditions, the command not associated with user input.

40. (Original) The method of Claim 39, wherein sensing the conditions of the computer with the microcontroller comprises detecting a temperature inside the computer.

41. (Currently Amended) A system for monitoring and diagnosing a computer connected to a microcontroller, the method comprising:

means for receiving from a source a request for the conditions of the computer;

means for sensing the conditions of the computer with the microcontroller;

means for receiving the sensed conditions in the microcontroller; ~~and~~

means for communicating the sensed conditions from the microcontroller to the source of the request; and

means for sending a command to modify the environmental conditions of the computer based at least in part on the sensed environmental conditions, the command not associated with user input.

42. (Original) The system of Claim 41, wherein the means for sensing the conditions of the computer with the microcontroller comprises means for detecting a temperature inside the computer.

43. (Currently Amended) A method of monitoring system functions of a computer, the method comprising:

controlling a plurality of environmental conditions of the computer using at least one microcontroller, the at least one microcontroller interconnected to a microcontroller network;

receiving a message sent from the system bus to the interconnected microcontroller, the message requesting a change in a selected one of the plurality of environmental conditions, the message not associated with user input; and

sending a message from the interconnected microcontroller to the system bus, the message indicating a change in the selected one of the plurality of environmental conditions.

44. (Original) The method of Claim 43, wherein the environmental conditions comprise a temperature inside the computer.

45. (Currently Amended) A computer monitoring and diagnostic system, comprising:

a computer, having a computing device and a housing;

at least one sensor, located within the computer, configured to sense conditions within the computer; and

at least one microcontroller, located within the computer, connected to the sensor and the computer, wherein the microcontroller is configured to process requests for conditions from the computer, ~~and~~ responsively ~~provides~~ provide sensed conditions to the computer, and self-manage conditions of the computer by modifying the conditions of the computer without user input, wherein the modification is based at least in part on the sensed condition.

46. (Currently Amended) The system of Claim [[1]]45, wherein the computer includes a plurality of canisters and the microcontroller is configured to control power to the canisters.

47. (Currently Amended) The system of Claim [[1]]45, wherein the microcontroller is configured to control power to a slot.

48. (Currently Amended) The system of Claim [[1]]45, wherein the microcontroller is configured to log conditions to a recording system.

49. (Currently Amended) The system of Claim [[1]]45, wherein the microcontroller is configured to log messages to non-volatile random access memory.

50. (Currently Amended) The system of Claim [[1]]45, wherein the microcontroller is configured to control the system power to the computer.